

## A B S T R A C T

The field of the invention is that of optical fibers for use in wavelength division multiplex transmission networks.

The dispersion managed optical fiber (1) for use in wavelength division multiplex transmission networks includes positive chromatic dispersion optical fiber portions (T+) alternating longitudinally with negative chromatic dispersion optical fiber portions (T-) and comprising in succession from the center towards the periphery a core having a varying index profile and then a cladding having a constant index, the outside radius of the index profile of the core, which is the limit between the core and the cladding, being sufficiently small for the optical fiber to function in monomode in-cable, each optical fiber portion (T+, T-) having at a wavelength of 1550 nm a chromatic dispersion whose absolute value is from 1 ps/nm.km to 10 ps/nm.km, a chromatic dispersion slope whose absolute value is less than 0.015 ps/nm.km, and an effective area greater than  $35 \mu\text{m}^2$ , the relative effective area difference at a wavelength of 1550 nm between the positive chromatic dispersion optical fiber portions (T+) and the negative chromatic dispersion optical fiber portions (T-) being less than 7%, and each optical fiber portion (T+, T-) having bending losses at a wavelength of 1625 nm less than 0.1 dB for 100 turns with a diameter of 60 mm.